

### **LISTING OF CLAIMS**

This listing of claims replaces all prior versions and listings of claims in the patent application.

Claim 1 (currently amended): A method for estimating an amount of angular disagreement of planes of polarization between two polarization-maintaining optical fibers in which at least one of the polarization-maintaining optical fibers has a pair of stress applying sections, and comprising steps of:

irradiating a light on the lateral side of said polarization-maintaining optical fibers during the connection of said polarization-maintaining optical fibers, and

estimating the amount of angular disagreement of the plane of polarization of the polarization-maintaining optical fiber having said stress applying sections from a function of said planes of polarization from positions and heights of two peaks of brightness corresponding to the stress applying sections of a transmitted light produced by irradiating said light.

Claim 2 (currently amended): A method for estimating an amount of angular disagreement of planes of polarization between two polarization-maintaining optical fibers in which at least one of the polarization-maintaining optical fibers has a pair of stress applying sections, and comprising steps of:

irradiating a light on the lateral side of said polarization-maintaining optical fibers after the connection of said polarization-maintaining optical fibers, and

estimating the amount of angular disagreement of the plane of polarization of the polarization-maintaining optical fiber having said stress applying sections from a function of said planes of polarization from positions and heights of two peaks of brightness corresponding to the stress applying sections of a transmitted light produced by irradiating said light.

Claim 3 (original): A method for connecting two polarization-maintaining optical fibers without angular disagreement by using the method for estimating the amount of angular disagreement of planes of polarization between two polarization-maintaining optical fibers according to claim 1.

Claim 4 (cancelled)

Claim 5 (original): A method for connecting two polarization-maintaining optical fibers with predetermined angular disagreement by using the method for estimating the amount of angular disagreement of planes of polarization between two polarization-maintaining optical fibers according to claim 1.

Claim 6 (cancelled)